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The Breast Cancer Trainees Research Collaborative Group: A New Multi-disciplinary Network to Facilitate Breast Cancer Research

Background

UK research data indicates that although there are currently more clinical trials in breast cancer than ever before, the total number of breast cancer patients participating in clinical studies has declined over recent years and there is significant geographical variation in patient involvement in research [1]. Several possible barriers to research participation have been identified. Advances in subtyping of breast cancers and increasing complexity of treatments have resulted in a relative lack of low intervention studies with broad eligibility criteria suitable to run at cancer units as well as tertiary centres. Some new breast care consultants may lack the necessary confidence and/or experience to take on the role of principle investigator (PI) for new studies [2]. Furthermore, although trainees routinely gain exposure to local service evaluation/audit projects, relatively few will become involved in multi-centre clinical research or achieve publishable data unless undertaking out-of-programme research. Finally, some national multi-centre interventional study proposals suffer from a lack of information regarding current routine practice across the UK.

Training future researchers is an important strategic aim for the NCRI Breast Cancer Clinical Studies Group (CSG) which already actively encourages inclusion of trainees in the late and early disease subgroup memberships and in trial management groups. In June 2017 the breast CSG committed to developing a new multi-disciplinary network of research active trainees and junior consultants in oncology, surgery, pathology and radiology working together to plan and deliver high quality observational research studies and pragmatic national audits. The aims of the Breast Cancer Trainees Research Collaborative Group (BCTRCG) are to produce the PIs of the future whilst engaging more patients in research and to also provide useful real-world data which will inform the development of future interventional studies.

Trainee research collaborative groups in the UK

The concept of a breast-cancer specific research collaboration was inspired by the success of trainee research networks in other specialities. Trainee driven collaborative research is a relatively recent phenomenon in the UK but has already led to a substantial increase in trainee research participation [3]. Initial advances were pioneered by the surgical trainee-led West

Midlands Research Collaborative (WMRC), which was set up in 2007 to deliver high-quality, multi-centre clinical research that will positively impact on clinical practice and patient care[4]. One of its major achievements was the prospective, multi-centre, randomised controlled ROSSINI trial [5], which investigated the application of wound edge protector devices to prevent surgical site infections.

Following the example of the WMRC, more trainee research groups have been established to create specialty-specific national networks, such as in neurosurgery [6] and urology[7]. Medical specialties are also now building their presence, for example the Geriatric Medicine Research Collaborative (GMRC) [8]. All of these collaboratives aim to drive novel high-quality research whilst providing valuable experience in clinical research skills to trainees and opportunities to publish outcome data.

From the outset the BCTRCG has engaged with existing complementary collaboratives such as the Mammary Fold Academic and Research Collaborative (MFAC), and the Northern Oncology Trainees Collaborative for Healthcare Research (NOTCH).

Launch Meeting

The launch meeting of the BCTRCG was held in May 2018. Invitations outlining the aims of the programme were sent to breast cancer related trainees and new consultants via their professional bodies and training directors. There were 39 attendees from 38 different hospitals from across the United Kingdom with a number of medical specialties represented with different levels of experience, from medical students to new consultants.

The first part of the meeting consisted of lectures on research associated topics relevant to trainees including the experiences of other trainee collaborative groups, principles of research design and the role of patient and public involvement. Prior to the meeting, attendees were invited to submit a two-line idea for a research project that could be run by the group. The contributors of the six most suitable research ideas were subsequently invited to “pitch” their idea in a “Dragon’s Den” format in which the audience and organising committee were able to “cross-examine” each candidate about their proposal. Three inaugural BCTRCG research projects were selected by the faculty and the attendees subsequently spent the afternoon

working in project specific groups to consider the study design (Box 1). The meeting concluded with a representative of each group providing a brief overview of the research plan and a planned timeline for producing a study protocol and achieving appropriate approvals.

Box 1: BCTR CG Projects 2018-2019

Outcomes of breast cancers treated during pregnancy compared to non-pregnant women

Long term trastuzumab use with no radiological evidence of disease

Prospective study of treatment and outcomes related to CNS disease secondary to breast cancer

Feedback

Formal feedback was obtained from 23 of the 39 attendees. Overall, the impression was decisively positive with rating of the event as extremely useful, having excellent organisation and the programme content being excellent measured at 70%, 78% and 87% of the responses, respectively. Moreover, the educational value of the presentations was rated highly.

Positive feedback was particularly directed at the group work to develop the selected research proposals, with the opportunities to network with trainees across specialties and regions and to participate in large scale research projects all highlighted. Enhanced motivation and enthusiasm towards involvement in multi-disciplinary research projects was a common theme cited in the comments. For some participants, the launch meeting represented their first introduction to cancer research, as epitomised by the following comment: *“I have only started my journey in Oncology and find this group a very good vehicle in which to widen my research interests”*.

Progress Since the formation of the BCTR CG

Since the inaugural meeting steps have been taken to begin structuring the group with appointment of two co-chairs (TR and VC) and a secretary (AH) as well as a management

committee consisting of 8 members and providing representatives from across the UK. The management committee liaises closely with the individual project steering groups to identify common areas of success and challenges. Protocols for each inaugural project have been developed with senior academic advice and approvals are in progress. Data collection will be performed by members of the group working with local colleagues, with the aim to recruit additional members as the projects progress. An educational grant from a pharmaceutical company has been secured to support the running costs of the three initial projects, including steering group expenses, statistical support and set-up of online databases. Oversight and governance of the collaboration is provided by an experienced clinical academic (EC) and regular progress reports are provided to the NCRI breast CSG.

Challenges and solutions

Data collection from multiple hospital sites always presents both practical and governance issues. We explored a number of potential IT solutions order to provide a central, online data repository that met the requirements of the General Data Protection Regulation (GDPR) and was accessible under a single user log on for all projects that a trainee may be involved in. REDCap access has now been secured on an ongoing basis. Where projects meet the criteria for audit, evidence of local trust approval for participation is required prior to any data collection and this inevitably has delayed progress of some projects. A template BCTRCG application and information form for use in individual hospital trusts is now in development to ease future approval applications.

Although the delays in progress presented by these issues had the potential to adversely affect the momentum of the group, close involvement of the management committee has ensured that the projects are now running productively. Obtaining funding for the running costs of the initial studies was instrumental in securing progress. It is intended that publications and presentations will raise the profile of this group going forward so attracting further investment in the future.

Future Plans

The second annual BCTRCG meeting is planned for early September 2019 and will follow a similar format to the inaugural meeting including trainee-specific lectures on research themes and a Dragon's Den session for new projects. In addition, updates regarding the previous year's projects will be presented with a view to expanding and developing these projects over the coming year. New and "old" projects will be run concurrently with an emphasis on new and current members becoming involved in the progress of both.

A key objective of the group is to increase its exposure to trainees at all cancer units and centres, via information dissemination at deanery level and close collaboration with established national breast cancer organisations such as the Association of Breast Surgery and the UK Breast Cancer Group. It is envisaged that with increased exposure and networking, this will lead to regular opportunities for trainees to present their work at regional and national conferences. Work has started on a central website, promoting the work and values of the group. This will also provide password-only access for members to communicate via an online forum, updates about their respective projects and ultimately become a platform for data entry for members.

Influences on other tumour sites

The success of the BCTRCG in its inaugural year has been widely recognised and this has led to direct approaches from trainees in other tumour sites and medical disciplines keen to learn from our experiences with a view to launching their own respective multi-disciplinary collaboratives. One such example is the recently formed Skin Diseases Research Collaborative. This also highlights a route for further "cross- pollination" with other trainees and the opportunity for close working and collaboration across different specialties.

Summary:

- Trainee driven research collaboratives represent a proven method of delivering high quality clinical research
- The BCTRCG is a new multi-disciplinary initiative which aims to provide clinical research experience to a range of breast cancer related trainees whilst involving more patients in clinical research
- The real-world data collected by this initiative will benefit the design of future interventional studies
- This model is potentially transferable to other common tumour sites.

(1519 words excluding text boxes)

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